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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,205	11/26/2001	Takeshi Okamura	81716.0081	9553

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EXAMINER

GLENN, KIMBERLY E

ART UNIT PAPER NUMBER

2817

DATE MAILED: 08/15/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/995,205

Applicant(s)

OKAMURA ET AL.

Examiner

Kimberly E Glenn

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 1-17 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1- 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saitoh US Pat. 5,864,782

Saitoh disclose a non-radiative dielectric waveguide comprising: a pair of parallel planar conductors (1 and 2) arranged at an interval of half or below of a high-frequency signal wavelength; and a dielectric strip (3 and 4) interposed between the parallel planar conductors, the dielectric strip (3 and 4) having a chamfer formed at an edge portion in a transmission direction of the dielectric strip. The chamfer is formed as a flat surface or as convexly curved surface. (Figure 7(A) and 7(B) and column 7 lines 41-62)

Thus Saitoh is shown to teach all the limitations of the claim with the exceptions of the chamfer being .01 to .3 mm wide, one width of the chamfer corresponding to a surface of the dielectric strip facing to the parallel planar conductor is made larger than the other width corresponding to a side surface of the dielectric strip and the surface of the parallel planar conductor adjacent to the dielectric strip being planar.

One skilled in the art, at the time of the invention, would have it obvious for the chamfer to be .01 to .3 mm wide and one width of the chamfer corresponding to a surface of the dielectric strip facing to the parallel planar conductor is made larger than the other width corresponding to a side surface of the dielectric strip in order to suppress electric current and reduce transmission loss. (Column 7 line 44-51)

One skilled in the art, at the time, of the invention would have found it obvious for the surface of the parallel planar conductor adjacent to the dielectric strip to be planar. Saitoh states in column 7, lines 54-62; the present invention is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the invention as hereafter claimed. The scope of the following claims is to be accorded the broadest interpretation so as to encompass all such modifications, equivalent structures and functions. Therefore, one skilled in the art would have found it obvious for the surface of the parallel planar conductor adjacent to the dielectric strip to be planar.

Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saitoh 5,861,782 in view of Fujimaru et al US Pat. 5,246,898 (of record).

The primary reference, Saitoh teaches a non-radiative dielectric waveguide comprising: a pair of parallel planar conductors 1 and 2 arranged at an interval of half or below of a

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high-frequency signal wavelength; and a dielectric strip 3 and 4 interposed between the parallel planar conductors, the dielectric strip being made of a ceramics.

Thus Saitoh is shown to teach all the limitation of the claims with the exceptions of the ceramic having an open pore ratio of 5% or less (or 3% or less) and the surface of the parallel planar conductor adjacent to the dielectric strip being planar.

Fujimaru et al shows a ceramic having open pore ratio being 7% or less. Fujimaru et al teach there is no need for performing sintering for long hour. As a result, reduction in the manufacturing cost can be achieved and dielectric ceramic having a higher Q can be manufactured stably. (Column 3 line 7-29)

One skilled in the art at the time of the invention would have found it obvious to have the open pore ratio of 5% or less (or 3% or less), since it have been held that where the general condition of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves routine skill in the art.

One skilled in the art, at the time, of the invention would have found it obvious for the surface of the parallel planar conductor adjacent to the dielectric strip to be planar. Saitoh states in column 7, lines 54-62; the present invention is intended to cover various modifications and equivalent arrangements included within the spirit and scope of the invention as hereafter claimed. The scope of the following claims is to be accorded the broadest interpretation so as to encompass all such modifications, equivalent structures and functions. Therefore, one skilled in the art would have found it obvious for the surface of the parallel planar conductor adjacent to the dielectric strip to be planar.

***Allowable Subject Matter***

Claims 6-17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: With regards to claims 6-17, the closest prior art of record Kii et al 6,437,663 discloses dielectric strip including a complex oxide comprising Mg, Al, and Si as the main components and having a Q value of 1000 or above at measured frequency of 60 GHz and the circuit configurations disclosed in claims 16 and 17. This prior art can not be used for a rejection since it is owned by the same assignee, Kyocera Corporation.

***Response to Arguments***

Applicant's arguments with respect to claims 1-5 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

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CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

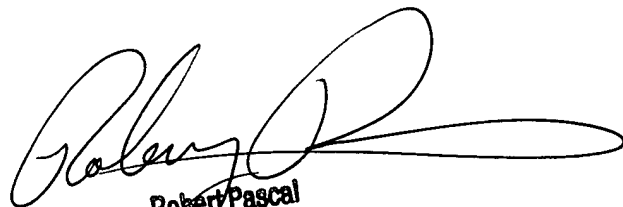
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly E Glenn whose telephone number is (703) 306-5942. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Kimberly E Glenn  
Examiner  
Art Unit 2817

keg  
August 8, 2003



Robert Pascal  
Supervisory Patent Examiner  
Technology Center 2800